BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work : Providing drinking water works in ward no. 8 in Byatarayanapura division.

Est. Cost. Rs. 13.00 Lakhs

Sl. No.	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRB 2-2.2: Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1 (b) / 2.3.5 (P.5/I.2.4 PW, P & IWTD, -SR 2016-17)	Cum							
	Wall Portion		2	5.40	0.75	0.75	6.08		
			2	2.40	0.75	0.75	2.70		
							8.775	22.64	**199.00**
	Basic Rate	283.00							
	Area Weightage 8%	22.64							
	Total	**305.64**							
2	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892cum and fine aggregates @ 0.465cum machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2 (P.12/I.4.2 PW, P & IWTD, -SR 2016-17)	Cum							
	Wall Portion		2	5.40	0.75	0.10	0.81		
			2	2.40	0.75	0.10	0.36		
			1	4.50	3.00	0.10	1.35		
			1	5.00	1.00	0.10	0.50		
							3.02	5449.68	**16458.00**
	Basic Rate	5046.00							
	Area Weightage 8%	403.68							
	Total	**5449.68**							

3	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammered dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 (P.23/I.5.6 PW, P & IWTD, -SR 2016-17)	Cum							
	Wall Portion		2	5.40	0.75	0.20	1.62		
			2	2.40	0.75	0.20	0.72		
			2	5.25	0.60	0.25	1.58		
			2	2.25	0.60	0.25	0.68		
							4.59	4521.96	**20756.00**
	Basic Rate	4187.00							
	Area Weightage 8%	334.96							
	Total	**4521.96**							
4	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13 (P.23/I.5.9 PW, P & IWTD, -SR 2016-17)	Cum							
	Wall Portion		2	5.05	0.45	0.20	0.91		
			2	2.60	0.45	0.20	0.47		
							1.38	5405.40	**7443.00**
	Basic Rate	5005.00							
	Area Weightage 8%	400.40							
	Total	**5405.40**							
5	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @0.46cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, return walls, walls (any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6 (P.13/I.4.11 PW, P & IWTD, - SR 2016-17)	Cum							

	Wall Portion - Plinth Beam		2	5.05	0.45	0.20	0.91		
			2	2.60	0.45	0.20	0.47		
							1.38	6491.88	**8939.00**
	Basic Rate	6011.00							
	Area Weightage 8%	480.88							
	Total	**6491.88**							
6	KSRB 4.2.8 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @0.46cum, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, return walls, walls (any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6 (P.13/I.4.12 PW, P & IWTD, - SR 2016-17)	Cum							
	Wall Portion -Lintels		2	4.80	0.20	0.20	0.38		
			2	3.00	0.20	0.20	0.24		
	Roof Beams		2	4.80	0.20	0.23	0.44		
			2	3.60	0.20	0.23	0.33		
	Roof Slab		1	4.80	3.90	0.12	2.25		
							3.64	6650.64	**24230.00**
	Basic Rate	6158.00							
	Area Weightage 8%	492.64							
	Total	**6650.64**							
7	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1 m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (P.16/I.4.34 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Sqm							
	Plinth Beam - Both Sides		4	5.05		0.20	4.04		
			4	2.60		0.20	2.08		
	Lintels		4	4.80		0.20	3.84		
			4	3.00		0.20	2.40		
	Roof Beams		4	4.80		0.30	5.76		
			4	3.60		0.30	4.32		
							22.44	276.48	**6204.00**
	Basic Rate	256.00							
	Area Weightage 8%	20.48							
	Total	**276.48**							

8	KSRB 4-6.2: Providing and removing centering height more than 3.5 mtrs, shuttering, strutting, propping etc., and removal of form work for flat surface such as suspended floors, roofs, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (P.15/I.4.29 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Sqm							
	Roof Slab		1	4.80	3.90		18.72		
							18.72	338.04	**6328.00**
	Basic Rate	313.00							
	Area Weightage 8%	25.04							
	Total	**338.04**							
9	KSRB 4.2.11 : Providing and laying in position reinforced cement concrete of nominal mix 1:1.5:3 with 12mm and down size graded granite metal, machine mixed, well compacted for plain chajja of 8.5 cms. average thickness, upto ground floor level, including cost of all materials, labour, HOM of machinery, finishing, curing, complete as per specifications. Specification No. KBS 4.1, 4.6 (P.14/I.4.20 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Chajja		1	4.80	0.60		**2.88**	555.12	**1599.00**
	Basic Rate	514.00							
	Area Weightage 8%	41.12							
	Total	**555.12**							
10	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specification. Specification No. KBS 4.6.2 (P.16/I.4.37 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Chajja		1	4.80	0.60		**2.88**	291.60	**840.00**
	Basic Rate	270.00							
	Area Weightage 8%	21.60							
	Total	**291.60**							
11	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 TMT Bars Fe 500 (P.17/I.4.46.2 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	T							

			0.50				**0.50**	60534.00	**30267.00**
	Basic Rate	56050.00							
	Area Weightage 8%	4484.00							
	Total	**60534.00**							
12	KSRB 5-14: Providing and constructing load bearing with solid concrete blocks having block density not less than 1800 kg/cum having a minimum avarage compressive strength of 4.00 Newton /sqmm conforming to I.S: 2185 (part-1): 2005 and constructed with CM 1:4 as per 2572:2005 including cost of materials, labour charges, scaffolding, curing hire charges of machinery etc., complete as per specifications KBS NO.5.4 - do - with solid concrete blocks of size 400 x200 x 200 mm (P.25/I.5.26.1 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Sqm							
	Wall Portion		2	4.80		2.70	25.92		
			2	3.00		2.70	16.20		
	Parapet		2	4.80		0.40	3.84		
			2	3.00		0.40	2.40		
	Steps		2	3.05		0.15	0.92		
							49.28		
	Deduction - RS		1	3.04		2.50	7.60		
	Lintels		2	4.80		0.20	1.92		
			2	3.00		0.20	1.20		
							10.72		
							38.56	1011.96	**39016.00**
	Basic Rate	937.00							
	Area Weightage 8%	74.96							
	Total	**1011.96**							
13	KSRB 7.5 : Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & pull operations complete including pulling hooks, 4Nos. handles with all fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8 m. Specification No. KBS 7.10 / 7.12 (P.31/I.7.5 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Sqm							
	RS		1	3.00		2.50	**7.50**	3090.96	**23182.00**
	Basic Rate	2862.00							

	Area Weightage 8%	228.96							
	Total	**3090.96**							
14	KSRB 7.6: Providing and fixing top covers made out of 20 guage M.S. sheet over pull and push rolling shutters bent to shape including cost of red lead primer coat of painting, materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 7.10.6/7.12 (P.32/I.7.6 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Mtr							
	RS		1	3.00			**3.00**	510.84	**1533.00**
	Basic Rate	473.00							
	Area Weightage 8%	37.84							
	Total	**510.84**							
15	KSRB 7.14 : Providing, fabricating, assembling and fixing in position anodized aluminium partitions using sections in combination of plain, single grove and double grove as per requirements for the frames of overall size 101.6mm x 44.45mm, 3.l8mm.thick having section weight, plain sections 2.40kg/m single grove section 2.541kg/rn. and double grove section 2.683 kg/m and bottom member 114.3mmx44.45mm 3.18mm thick weight 2.646 kg/rn; aluminium louvres of size 77.6rnmx27.6rnm 1.7mm. thick section weight 0.483kg/rn; bottom portions provided with 12mm. thick prelaminated sheet both side of approved colour lamination exterior grade; aluminium sections of mat finish or glossy finish using section, spacing of vertical rnernber shall not exceed 0.6 m. c to c; sections are cut to the required lengths, joints mitered and corners grinded subdividing frames tennoned and rivetted to the frames,	Sqm							

	the assembled frame should be stiffened with corner angles stripped and fixed with screws, rawl plugs and teak wood gutties to R.C.C.columns or rnasonry on sides, R.C.C. lintels or bearns at top and floor at bottom, including cutting chistling and making good with cement mortar to match the surface, providing and fixing bottom panel filled with the materials to a height of 0.9rn. from floor level; and 5.5mms; vertical members embedded in the flooring by making suitable size holes and fixing with cement mortar, with necessary opening for fixing of doors of standard size (excluding cost of door opening) All the frame should be throughly cleaned free from rust, scale or dirt including cost of materials, fixtures, labour and HOM of machinery complete as per specifications. (P.34-35/I.7.14.1PW, P & IWTD -SR-2016-17)								
			1	4.20		2.10	8.82		
	Deduction -D		1	1.10		2.10	2.31		
							6.51	5030.64	**32749.00**
	Basic Rate	4658.00							
	Area Weightage 8%	372.64							
	Total	**5030.64**							
16	KSRB 7.16 Providing, fabricating, assembling and fixing in position anodized aluminium shutters to the existing door frame in the partition using 47.62x44.45mm section thickness 3.18mm, weight 1.505kg/rn for vertical frame; 47.62x44.45 thickness of 3mm, weight 1.42kg/rn for top section, 49.91 mmx44.45mm with wall thickness 3mm, weight 1.495kg/rn for central rail; and 11 4.3mmx44.45mm thickness 3.18mm, weight 2.646kg/rn for bottom rail using aluminium sections anodized 12 to 15 microns and cut to length joint metred and corners grinded, the bottom rail and top rail hinged or pivoted, opening arrangements including providing and fixing standard approved accessories, such as aluminium handles, tower bolts, lock, pivots: hinges P.V.C. or rubber gasket, 12mm prelaminated sheets (Novopan) exterior grade of approved colour both sides same colour for bottom panel of maximum height 0.90rn and 5.5mm thick plain glass for top panel (Novopan and glass fixed with glazed clips 19mmx17.3mmx11 mm, 0.9mm thick, weight 0.124kg/rn; aluminium sections treated for removal of any rust and prevention of further rust formation, and coated with greasy materials for non-adherance of mortars or any other sticky materials, including cost of materials, fixtures, labour and HOM of machinery complete as per specifications. (P.36/I.7.16.1 PW, P & IWTD,	Sqm							
	D		1	1.10		2.10	**2.31**	4290.84	**9912.00**
	Basic Rate	3973.00							
	Area Weightage 8%	317.84							
	Total	**4290.84**							

17	KSRB 15-3.8 : Providing 18mm thick cement plastering single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. (P.114/I.15.16 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Inside Plastering		2	4.50		3.00	27.00		
			2	3.00		3.00	18.00		
							45.00		
	Deduction - RS		1	3.04		2.50	7.60		
							37.40	238.68	**8927.00**
	Basic Rate	221.00							
	Area Weightage 8%	17.68							
	Total	**238.68**							
18	KSRB 15-3-13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. (P.114/I.15.21 PW, P & IWTD,SOUTH ZONE - SR 2016-17)	Sqm							
	Ceiling Plastering		1	4.50	3.00		13.50		
			1	4.80	0.70		3.36		
	Roof Beams		4	0.60	0.30		0.72		
							17.58	208.44	**3664.00**
	Basic Rate	193.00							
	Area Weightage 8%	15.44							
	Total	**208.44**							
19	KSRB 15-3.9 : Providing 18mm thick cement plastering single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. (P.114/I.15.17 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Outside Plastering Portion		2	4.80		3.15	30.24		
			2	3.30		3.15	20.79		
	Parapet		4	4.80		0.40	7.68		
			4	3.30		0.40	5.28		
							63.99		
	Deduction - RS		1	3.04		2.50	7.60		
							56.39	213.84	**12058.00**
	Basic Rate	198.00							
	Area Weightage 8%	15.84							
	Total	**213.84**							

20	Providing and laying/fixing cement base, precast, pre polished cement concrete, designer tiles 25mm thick conforming to IS 1237 heavy duty tiles for flooring, treads of steps and landing, laid on a bed of 12mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of materials, including cutting, griding the edge to half/full round wherever required, labour, curing complete as per specification. (P.109/I.14.43 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
			1	4.80		0.60	**2.88**	1171.80	**3375.00**
	Basic Rate	1085.00							
	Area Weightage 8%	86.80							
	Total	**1171.80**							
21	KSRB 15-14.1 : Providing and applying two coats with oil bound washable distemper of approved brand and shade on wall surface including priming coat with distemper primer after throughly brooming the surface free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications. (P.117/I.15.49.1 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Inside Plastering Portion		2	4.50		3.00	27.00		
			2	3.00		3.00	18.00		
	Ceiling Plastering Portion		1	4.50	3.00		13.50		
			1	4.80	0.60		2.88		
	Roof Beams		4	0.60	0.30		0.72		
							62.10		
	Deduction - RS		1	3.04		2.50	7.60		
							54.50	76.68	**4179.00**
	Basic Rate	71.00							
	Area Weightage 8%	5.68							
	Total	**76.68**							
22	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint with primer of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer (P.118/I.15.53.2 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	Outside Plastering Portion		2	4.80		3.15	30.24		
			2	3.30		3.15	20.79		
	Parapet		4	4.80		0.40	7.68		
			4	3.30		0.40	5.28		
							63.99		
	Deduction - RS		1	3.04		2.50	7.60		
							56.39	90.72	**5116.00**

	Basic Rate	84.00							
	Area Weightage 8%	6.72							
	Total	**90.72**							
23	KSRB 15-18.2: Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. (P.119/I.15.74 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Sqm							
	RS	2.25	1	3.04		2.50	17.10	88.56	**1514.00**
	Basic Rate	82.00							
	Area Weightage 8%	6.56							
	Total	**88.56**							
24	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (internal work exposed on wall) - 25mm nominal OD pipes (P.96/I.13.85.3 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	M							
	For Pipeline Work		4	6.00			**24.00**	183.60	**4406.00**
	Basic Rate	170.00							
	Area Weightage 8%	13.60							
	Total	**183.60**							
25	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (internal work exposed on wall) - 20mm nominal OD pipes (P.96/I.13.85.2 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	M							
	For Pipeline Work		6	6.00			**36.00**	145.80	**5249.00**
	Basic Rate	135.00							
	Area Weightage 8%	10.80							
	Total	**145.80**							

26	KSRB 13-6.2-2 : Providing and fixing in position brass stop cock of approved quality 20mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS 13.2.2/13.3 (P.91/I.13.27 PW, P & IWTD,SOUTH ZONE -SR 2016-17)	Each							
			5				**5.00**	172.80	**864.00**
	Basic Rate	160.00							
	Area Weightage 8%	12.80							
	Total	**172.80**							
27	Providing and fixing of Aluminium composite panel of approved make and colour for wall cladding for straight Brick/Rcc/stone walls & coloumns/beams with necessary aluminium frame works at required level made out of 50x25x3mm C section or equalent. The panel should consist of 2.5 mm thermoplastic core of antitoxic LDPE sandwiched between 0.25 skins thick aluminium sheet making a total panel thickness of 3mm. The surfaces will be finished with PVDF based coating on topsides and service coating on reverse sides would be in polyester paint. The system shall be fixed using GI brackets, aluminium L cleats and stainless steel bolts and nuts complete with spring washer and cap nuts and all other necessary accessories, sealing shall be done using weather sealant of Dow Corning 789 with necessary rods etc., complete.	Sqm							
			1	7.00	2.00		**14.00**	4861.08	**68055.00**
	Basic Rate	4501.00							
	Area Weightage 8%	360.08							
	Total	**4861.08**							
	R O PLANT								
	Providing Reverse Osmosis System to cover 2000 liters of High TDS								
	TECHNICAL Specifications								
	Flow Rate:								
	Feed Water : 5000LPH								
	Treated Water : 3000LPH								
	Reject Water : 2000LPH								
a)	**RAW WATER PUMP**								
	Purpose :- To feed the Dual Media Filter at pressure more than 2.0 bars, which is min. operating pressure for filter ?								
b)	**SAND MEDIA FILTER**								
	Purpose :- to remove the total suspended solids, dirt,iron and reduce silt density index which can foul the members.								

c)	**ACTIVATED CARBON FILTER**								
	Purpose:- To remove the total color, smell, odor, from the water.								
	Media : Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) Carbon Average porosity 50 micron particulate size bed depth: 1500mm								
	Pipelines & Accssories: Pipe of PVC 10 Bar tested pressure Testing cock & pressure guages at Inlet-Outlet of system.								
d)	**MICRON FILTER**								
	Purpose:- To remove the fine particles up to 05 microns and reduce silt density levels to acceptable level.								
e)	**HIGH PRESSURE PUMP**								
	Purpose:- To feed the reversw Osmosis Membrane at pressure more than the osmotic pressure taking into cosideration flux rate,flow and recovery								
	RO membrane Housing.								
	Purpose:- pack membrane and operatet high pressure.								
	RO MEMBRANES								
	Purpose:- To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow and recovery.								
	RO CLEANSING SYSTEM.								
f)	**ELECTRICAL PANEL**								
	Purpose:- A Control panel is provided as a safety measure for the pumps & other electrical items Specifications a) Complete Starters, overload relays,								
	b) Voltmeter, Ammeter, MCB's indicating lights								
	c) Rockers switches for Dozers								
	d) Incomers, Auto- manual switches.								
g)	**INSTRUMENTATION**								
	Purpose:- A) Flow Meter: To measure the online flow of water flowtec b) Low pressure switch : To protect RO Pump from dry running c) High pressure switch: to protect RO pump from back pressure d) Pressure Gauges: For claculate AP for each unit in RO system.								
	PH DOSING SYSTEM								

	Purpose TO DOSE SODIUM Bi-cabonate for enhances product water SS till the prefiltration & SS from HPP to the permeate line termination point NRV's Pressure relief valves, whereever needed the system will be on common SS base frame Supply & manufacture of complete REverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.								
		Nos	1				**1.00**	810000.00	**810000.00**
	For Electrical Works								
28	Supplying and wiring adopting loop system in existing PVC Conduit/casing capping using copper PVC insulated multi strand 2x1.5 Sq mm copper wire with a 6 Amps flush type SP control switch shall be fixed on the existing plastic sheet gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block complete for each outlet. (P.5/I.2.1 PWD,ELE -SR 2014-15)	Point							
b	Medium point above 3 Mtrs up to 6 Mtrs from tapping point to out let via switch								
			4				**4**	245.00	**980.00**
c	Long point above 6 Mtrs up to 10 Mtrs from tapping point to out let via switch								
			4				**4**	363.00	**1452.00**
29	Supplying 6A flush/projected type socket and 6 amps flush/projected type SP switch either surface/flush mounting in a existing gang box or in a 4mm thick plastic sheet and fixing over a flush mounted wooden box and wiring using necessary capacity wires as required. 6 Amps 2 Way (P.15/I.3.1.1 PWD,ELE -SR 2014-15)	No							
			4				**4**	127.00	**508.00**
30	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete.	Each							
	4"x4"x3"		4				**4.00**	68.00	**272.00**
	12"x12"x3"		4				**4.00**	116.00	**464.00**
	10"x7"x3"		4				**4.00**	87.00	**348.00**
31	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches regulators etc., and fixing on existing wooden or metal box using N.F. screws. (P.17/I.3.10 PWD,ELE -SR 2014-15)	Sqcm							
			20000.00				**20000.00**	0.22	**4400.00**

32	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete . (P.3/I.1.7.1 PWD,ELE -SR 2014-15)	Mtr							
	upto 50mm conduit in brick wall		1	12.00			**12.00**	21.00	**252.00**
33	Concealed Conduit System Supplying heavy gauge PVC conduit pipe 20mm dia 2mm thick confirming to IS 2509 with suitable size bends, metal/PVC junction boxes, adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures, run with 18SWG GI fish wire wherever necessary (P.2/I.1.2.1 PWD,ELE -SR 2014-15)	Mtr							
			1	12.00			**12**	43.00	**516.00**
34	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230 volts lamps. (P.20/I.4.2 PWD,ELE -SR 2014-15)	Each							
			1				**1**	88.00	**88.00**
35	Supplying patti type fluorescent tube light fitting of 4' -suitable for 28 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp.(P.20/I.4.6 PWD,ELE -SR 2014-15)	Each							
			2				**2.00**	669.00	**1338.00**
36	Wiring for lighting / power circute using one of PVC insulated 1100v/grade multies and copper conductor single core cable in open or consealed system of wiring A Group materials 1.50 Sqmm materials (P.6/I.2.5.3 PWD,ELE -SR 2014-15)	Rmtr							
			1	12.00			**12.00**	18.60	**223.00**
37	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230V GLS lamp. (P.20/I.4.3 PWD,ELE -SR 2014-15)	Each							
			4				**4.00**	747.00	**2988.00**
									1170891.00
38	**Add K.R.D.I.L Charges (11%)**								**128798.01**

Sl. No.	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
									310.99.
41	Miscellaneous and Unforeseen charges	Ls							123.77
								Total	1300000.00
(Rupees Thirteen Lakhs Only)									

CERTIFICATE

1) The site has been inspected and the work is found to be necessary.
2) The rates adopted are as per PW,P IWTD,SOUTH ZONE SR of 2016-17 & PWD ELE SR 2014-15 of Bangalore Circle.
3) The provisions were made in this estimate are necessary and adequate.
4) The area comes under the Bruhat Bengaluru Mahanagara Palike Limits.

Assistant Engineer
Ward No.8

Assistant Executive Engineer.
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bengalore.

Assistant Executive Engineer
Kodigehalli Sub Division
BBMP Bangalore

Executive Engineer
Byatarayanapura Division
BBMP Bangalore
19/08

Administrative Approval
Accorded For 13.00 lakhs
Head of A/C P3110
CER NO : 94 Dt:. 19.08.17

TA

CE (YNK)

TECHNICAL SANCTION
Accorded For Rs. Thirteen Lakhs only
Head of A/c P-3110
Div. Ref. No. 47/17/18 Date. 03/01/18.

AE 03/01

EE(BTP) 3/01